

# The Future of the Smart Building

Why the key to greater efficiency and profitability in facility management starts from the ground up.



Avidbots®

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# The Future of the Smart Building

Why the key to greater efficiency and profitability in facility management starts from the ground up.

## Introduction

*“The modern facilities manager is challenged with the business goal of doing more with less. To achieve this, leaders must extract the highest value from the people and technology available.”*




Every business today is automating. They are doing so because automation helps businesses work smarter. Those embracing innovation know about operational issues sooner, make decisions faster, and act more insightfully.

From back office to front lines, technology is being used to help everyone do more with less. Business objectives, such as driving greater efficiencies and harnessing the power of modern technology, are on every manager’s to-do list.

For facility managers (FMs), tasked with an increasingly wider and deeper set of responsibilities, the need for automation has never been stronger. FMs must manage the increasing complexity of buildings, merge legacy properties, processes and people with new additions, while ensuring business continuity.

With limited resources, the FM is tasked with operating the entire organization at maximum productivity at all times. Automation is the key to accomplishing this goal.

## Drivers to Automation



*“For us, automation is the holy grail. It is the answer to the need we have to maximize productivity and elevate our employee’s potential. Across every corner of our business there is an element of ‘innovate or die’ and to live, we must constantly be looking for new ways to be more efficient, more productive and more profitable. With automated floor cleaning, we are accomplishing this from the ground up.”*

We recently hosted a panel of facility leaders from across various industries, at ISSA 2018, who have begun their digital transformation journey using automated solutions.

Drivers to automation was one of the most fundamental topics discussed. Throughout this book we will share pieces of the conversation from the panel as a way to illustrate some of the concepts discussed. It was not surprising to find that many of the panelists, regardless of industry, shared the same challenges and opportunities.

### These drivers to automation include:

- ▶ **Labor:** Rising minimum wages, a shortage of people willing to take on frontline operations roles, a fluctuation in labor demand, labor availability due to sickness and other absences, and the imminent retirement of many baby boomers.
- ▶ **Return on Investment:** There is more accountability than ever before for businesses to remain attentive to spending and to demonstrate quick returns on investments.
- ▶ **Growth:** As businesses grow and acquire new properties, the need to scale rapidly and efficiently is critical.
- ▶ **Consistency:** Offering reliable and repeatable service quality is a significant competitive advantage, enhancing the trust and reputation of the business.
- ▶ **Management KPIs:** As the use of technology increases, facility managers are able to do less manual supervision and increase their strategic planning.

## Automation From the Ground Up

This eBook presents:

An overview of some of the global trends influencing facility management today.

Drivers to automation, such as labor and growth, and how they are compelling facility managers to innovate.

Insights from the Avidbots panel at ISSA 2018 that highlight the realities of facility leaders who have advanced their cleaning capabilities and performance with robotic, automated floor cleaning solutions.

## Create Greater Efficiency and Productivity in the Facility

*“We have about 25,000 employees that work within our commercial cleaning business. Part of our business is in Canada, part of it is in the U.S. For us, a cleaner now costs anywhere from \$35,000-\$45,000. The cost of labor is becoming very, very expensive. As well, the ability to get labor and get labor consistently is becoming more and more of a challenge. 12-15% of our workers don’t show up every day, so think about juggling that over millions and millions of square feet. Labor is one of the most significant drivers to automation we face today.”*

Today’s facilities are capital-intensive tools used to drive better performance, support and enhance overall business efficiency. Maximizing the value delivered through facility assets and services is paramount for senior leaders. But a large part of facility costs, particularly in maintenance, is tied to labor. It is this area where facility managers need to explore innovation strategies.



By focusing on ways to make labor more efficient and productive, profitability gains can be realized and reinvested. A well-thought-out automation solution can reveal untapped operational efficiencies and drive a business toward increased productivity and profitability. Facility managers play a vital role in accomplishing these goals.

In many organizations, facility cleaning offers a valuable source of productivity gains. By analyzing and improving current practices, organizations can achieve long-term savings, while also helping to make a building cleaner and safer. Technology, such as an automated floor cleaning solution can help, not only keep a facility clean, but do so on an ever-decreasing budget.

*“With an automated floor cleaning solution, you have to map the route first and that means teaching it the cleaning path. Do you take the same cleaning path that’s been done for the last 20 years? Or do you look at a smarter way to do the cleaning path? Automation offers an opportunity to optimize your cleaning and change the process.”*





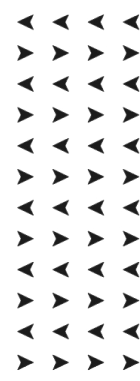
## Establish a Connected Facility Ecosystem


*“There is no such thing as a separate piece of equipment or an individual who works alone in our facility today. The entire organization must run cohesively as one, in order, to meet the demands of our business.”*

With advances in connectivity, buildings now have a plethora of equipment and devices with various capabilities for sharing operational information. Some simply monitor and provide data while others can interact intelligently with other devices. For example, thermostats, solar panels and window blinds can all work together to save energy and keep an environment comfortable. Or automated lighting and security systems can help to detect presence - and potential threats - while also saving energy. The connected facility ecosystem orchestrates an array of sensors, devices and intelligent software to support a business that is more efficient and more productive.

The facility manager is tasked with ensuring that today's ecosystem is working correctly and also anticipating how new technologies will change the way the facility is run in the future. When planning a facility management ecosystem, the platform must be sufficiently adaptable and agile so that it can be added to later. Making this a priority from the beginning reduces the risk of future challenges.

Well-built ecosystems allow for major improvements in productivity and efficiency through technology. Managers aiming to implement workplace systems must be considerate of the technical, business and cultural needs of the workplace. With these considerations in mind, you can create a facility management ecosystem that benefits your organization and supports a more productive workforce.





“We know every second that the robot runs and when it’s running, how long we can maximize the efficiency of that machine. If you have the space and they’re available, you can run that robot 24 hours, so you can manage workload and you know where that machine has gone. The return on investment is maximizing the runtime available within your property.”





## Expanding Human Potential


*“Implementing automation means having to change the way things have always been done. And change is hard because when you disrupt the status quo, people may fear what’s around the corner. Everyone within the building can be impacted. Understanding a solution’s capabilities to help people, and finding ways to bring the purpose of automation to life for workers, is essential for successful transformation.”*

Technology has been changing the role of the facilities manager for decades. Automation is increasingly freeing employees from day-to-day tasks and allowing them to focus on strategies that add greater value to customers, coworkers and the organization.

As managers become empowered with more time to focus on these strategies, employees are also being given the opportunity to benefit from automation. While many still fear that technology is going to replace jobs, in most workplaces automation is being used to augment or enhance human work. By removing certain tasks from the hands of workers, they can focus their efforts in a way that can increase their overall productivity and the performance of the business as a whole.

In a Harvard Business Review article, Mark Muro and Scott Andes at the Brookings Institute write that robots tend to make people more productive. They cite a study that found between the years 1993 and 2007, robotics increased labor productivity around 0.35 percent annually — roughly what the steam engine did for workers during the height of the Industrial Revolution. The reason productivity rises is because people are able to hand off repetitive work to machines, which frees them up to focus on the tasks best performed by humans.





“Automating our floor cleaning wasn’t to replace people’s jobs. We did it to enhance what our employees can do. It allows them to do things easier and quicker, and it takes some of the monotony out of their work.

It was a tough sell at the beginning but that’s why we started preparing for it at least a year ahead of implementation. It’s now commonplace and we even have employees asking for more automation because they can see the benefits of it for the business and for themselves.”





## Leverage New Data-Driven Insight

*“Data is extremely important. From my perspective, I get into the labor and the cost, so when I know exactly how long a task is taking - what it would have taken for a human to do it - I can break it down to the per foot on cleaning, and then present that to our senior management. The data reaffirms what has been done and gives insight into what ought to be done tomorrow.”*

According to an IBM Marketing Cloud study, 90% of the data on the internet has been created in the last two years alone, with over 3.8 billion Internet users across the planet generating roughly 2.5 quintillion bytes of data per day. There is a fear that with an overwhelming influx of data from the connected facility, managers simply won't have the time to analyze and act on the data provided. With this extraordinary wealth of data available, it is critical that organizations adopt intelligent solutions that deliver actionable insight – not just data – providing easy-to-digest metrics and recommendations to help manage their operation.

Facilities management is one important area that can benefit from data. A data-driven approach to facilities management allows leaders to effectively forecast the company's future. By measuring and understanding the impact your decisions have made in the past, you'll be able to refine your strategy for the future. From this insight, you'll have objective, quantitative clarity to support optimization efforts, boosting operational performance and, most importantly, your bottom line.

Leading facilities managers are already tracking data about all processes and operations to be certain they are making the best determinations - based on timely, accurate information. Being able to capture and analyze this data efficiently is paramount to business success. Unlike traditional spreadsheets or even hand-written notes, real-time data reporting provides the right information at the right time.

*“From the data we receive, we now have an ability to dynamically staff so that we can clean stuff that needs to be cleaned and not clean stuff that doesn't need to be cleaned. We have the ability to switch out our workloads and focus on delivering a product to a client that excites them. (We can) do that without spending more money - a reallocation of effort and workloading through data.”*

# Build a Smart Business with Smart Facility Management

*“You’re managing the machine, the machine’s not managing you.”*

A smart business is one in which the people, processes and place are all connected through technology and each part benefits from the other. A report from Navigant Research informs us that the IoT market for intelligent buildings will exceed \$22B in 2026 from \$6.3B in 2017. Christina Jung, research analyst with Navigant Research says: “Leveraging Internet-connected devices that collect and communicate data and software for data aggregation and analysis, IoT-enabled intelligent building solutions are secure, scalable, and interoperable. They support open communications and standards within the building space, assisting with reduced costs and improved integration possibilities.”

Facilities managers need to stay ahead of the curve with smart building technology. It’s essential to upgrade and upskill now, to take advantage of the new possibilities on offer or risk becoming outdated and outmaneuvered. But transformation truly happens when automation technology is connected to both the data being generated and embraced by the operators supporting the organization.

Facility managers are responsible for keeping maintenance prices low in the facility while also delivering high standards of service. Cleaning operations are particularly impacted by the need for stringent cost control measures because it’s perceived to be unskilled work and, therefore, should remain inexpensive. Automated solutions help drive improved standards, offer more consistent delivery and unlock efficiencies that can be reinvested for smarter business differentiation, through enhanced customer experience. Together, technology, data and employees can help the facility manager meet the critical balance of high service and low prices.

*“We can either wait or we can lead the way and be pioneers. With many of the automation projects we’re taking on, we are truly being pioneers. These things have never been done before. We need to be able to communicate the value in this to our stakeholders so that they understand that innovation triumphs perfection. We have to remember that not only are our facilities getting smarter, but so are we.”*



# Meet Neo, the Autonomous Floor Scrubbing Robot

Powered by Avidbots, Neo™ automates commercial floor cleaning to lower labor costs, increase productivity, and deliver clean, dry, streak-free floors throughout your facility. Neo takes the burden of floor scrubbing off your cleaning staff, freeing them to focus on more value-adding tasks.

## Intelligent cleaning for a smarter business:

- ▶ **Automated navigation and first-class cleaning.** Neo uses preinstalled cleaning maps and an array of smart sensors to navigate and clean your facility. Neo detects and works around obstacles in its path, so requires little supervision.
- ▶ **Safe and simple operation.** Intuitive touchscreen controls allow easy operation in automated or manual cleaning modes. Integrated safety features prevent collisions, protecting people and property.
- ▶ **Maximum uptime. Minimized costs.** Up to six hours run time and twin 120L water tanks maximize operating time, with limited maintenance required. Enhanced cleaning productivity, floor coverage and consistency boosts customer experience and your bottom line.
- ▶ **Keeps you in the know.** Take the guesswork out of facility management. Avidbots Command Center monitoring portal provides unprecedented insight into cleaning performance and status, allowing instant access to productivity metrics and coverage maps after every clean. Monitor one or an entire fleet of Neo robots remotely to enhance and maintain operating standards.
- ▶ **World-class support.** Our team of expert map editors, support engineers, deployment specialists, and account managers work in partnership with your operators to launch and optimize your cleaning program. Get help with initial training and configuration needs, request revisions to facility maps, and access our technical support team 24-7 for remote monitoring.

Learn more about Avidbots Neo and smarter business cleaning at [Avidbots.com](https://www.avidbots.com)



# ISSA 2018: Deploying Automated Floor Cleaning Robots in Facilities Management

At ISSA 2018, we held a panel at which four recent Avidbots customers shared their stories of planning and deploying the Neo automated floor-scrubbing robot at their facilities. These business leaders, from industries including education, retail, food service and commercial real estate, shared their perspectives on transitioning from legacy solutions to the future of commercial floor cleaning - Neo.



**Kimberly Train** is the Director of National Programs at Oxford Properties Group. Kimberly's experience comes from her work with commercial landlords and business relationship management in the area of shopping centers and real estate development. Oxford Properties Group is a global real estate firm with assets in North America and the EU with over 55 billion in assets under management.



**Craig Rudin** has spent the last 30 years in the chemical manufacturing and distribution business and joined Superior Solutions. Craig is the CEO of Superior Solutions Group, a GDI company. GDI is one of the largest facilities management companies with over one billion in revenue, providing customers with end-to-end solutions that drive a cleaner, healthier and safer environment at lowest total cost.



**Derek Sylvester** has been in the facilities field for over 15 years, currently as the Director of Building Environmental Services at Rochester Institute of Technology, RIT. Derek's team of 120 staff supports 70 buildings with over five million square feet of cleanable education space.



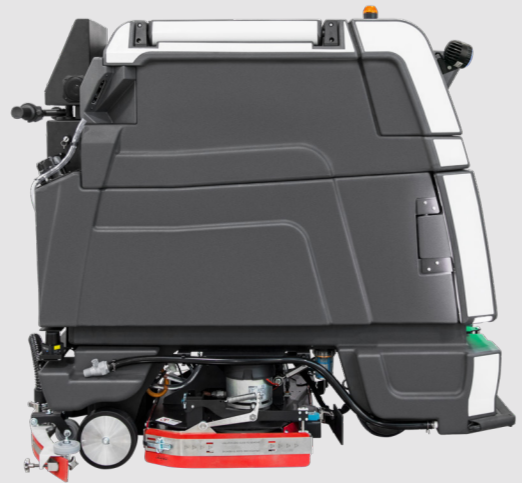
**Paul Rocha** is the VP Operations for Eurest Services, a division of the Compass Group, a global food service industry giant with holdings around the world. Eurest provides global clients with customized facilities, solutions and services.

Head to [Avidbots.com](https://www.avidbots.com) to read the panel discussion in full. Get an inside look at how Neo is not only revolutionizing floor cleaning for these organizations but also boosting productivity and profitability, through maximizing human potential.



## Why Avidbots?

Buying an Avidbots Neo isn't just buying a floor scrubber. It's investing in a technological future that can redefine your cleaning function, making it more productive, more cost effective and easier to run. More importantly, our robotics and AI technology open up new opportunities to make your business even more successful. We realize this isn't just about buying a product, or a technology, or even a business proposition. You want to buy into a trusted partner who can take you into the future of automated operations using cutting edge robotics. At Avidbots, we work side-by-side with our customers to earn that trust and realize all the benefits that robotics can bring them.



## About us

Avidbots is a robotics company with a vision to make robots ubiquitous to unlock humanity's potential with a hyperfocus on autonomous cleaning. Our groundbreaking product, the Neo fully autonomous floor scrubbing robot, is deployed around the world and trusted by leading facilities and building service companies. Headquartered in Kitchener, ON, Canada, Avidbots is offering comprehensive service and support to customers on 5 continents.

## Contact us

Learn more about Neo.



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